AMENDMENTS TO THE CLAIMS

Claims 1 – 15 have been amended. Claims 16 – 19 have been added. A listing of the claims follows and replaces all prior listing of the claims.

Claim 1. (currently amended) ~~The control~~ A method of arranging carbon nanotubes at selected orientations ~~selectively orientationally~~ on the surface of a substrate, comprising the steps of:

1) subjecting a solid substrate ~~is treated to be~~ to a hydrophilic or hydrophobic treatment;

2) chemically modifying purified carbon nanotubes by surface attachment of organic macromolecules with ~~macromolecular with a~~ hydrophilic and hydrophobic ends to ~~end is combined to the surface of every~~ the purified carbon nanotubes; ~~which has been purified routinely,~~

3) dissolving the chemically modified ~~and then the resulted~~ carbon nanotubes ~~is dissolved into~~ in water or an organic solvent to form a solution;

4) ~~3)~~ spreading the ~~said~~ solution ~~is spread~~ onto the surface of a body of water ~~in sub-phase,~~;

5) vaporizing the water or organic solvent from the spread solution to create a monolayer film of carbon nanotubes on the water body surface;

6) after said vaporizing, ~~then after the water or the organic solvent has been~~ compressing the monolayer film on the water body surface by controlling ~~volatile out, the~~ a surface pressure-area isotherm of the ~~carbon nanotube thin~~ monolayer film ~~with single molecular on the water surface is controlled to press film~~; and

7) ~~4) the resulted~~ transferring the compressed monolayer ~~carbon nanotube~~ film ~~with single layer is transferred~~ to ~~the~~ a surface of the ~~said~~ treated solid substrate to form thereon a ~~arrangement~~ layer of selectively oriented carbon nanotubes.

Claim 2. (currently amended) The ~~control~~ method of claim 1, wherein the hydrophilic treatment of the ~~said~~ solid substrate ~~is to submerge~~ includes submerging the solid

substrate into a concentrated ~~concentrate~~ acid at a temperature above 50°C~~, and hydrophobic treatment of that is to silanize the substrates after hydrophilic treatment~~.

Claim 3. (currently amended) The ~~control~~ method of claim 2, wherein the ~~concentrate~~ concentrated acid is a ~~the~~ concentrated nitric acid.

Claim 4. (currently amended) The ~~control~~ method of claim 1, wherein:

said chemically modifying the purified carbon nanotubes includes sulfating the carbon nanotubes ~~will be sulfated/nitridized firstly~~ to form carboxyl groups ~~at each end and side of the tube~~ on each of the two ends and a side of each of the carbon nanotubes, and acylating and aminating the carbon nanotubes ~~then acylated and aminated~~ to attach the organic macromolecules to the carbon nanotubes; ~~macromoleculare.~~ where the sulfating is followed by the acylating and aminating.

Claim 5. (currently amended) The ~~control~~ method of claim 1, wherein the surface pressure-area isotherm of the monolayer ~~carbon nanotube single molecular thin~~ film is controlled ~~during step 3)~~ with a pressure of about 20-50mN/m.

Claim 6. (currently amended) The ~~control~~ method of claim 1, wherein a high energy light irradiation ~~of high energy~~ is applied to the layer of selectively oriented carbon nanotubes ~~monolayer film formed in step 4), in order~~ so that some of the organic ~~macromoleculare~~ macromolecules with hydrophilic and hydrophobic ends are decomposed and evaporated from the substrate.

Claim 7. (currently amended) The ~~control~~ method of claim 6, wherein the high energy light irradiation is UV irradiation.

Claim 8. (currently amended) The ~~control~~ method of claim 2, wherein a high energy light irradiation ~~of high energy~~ is applied to the layer of selectively oriented carbon nanotubes ~~monolayer film formed in step 4), in order~~ so that some of the organic ~~macromoleculare~~

macromolecules with hydrophilic and hydrophobic ends are decomposed and evaporated from the substrate.

Claim 9. (currently amended) The ~~control~~ method of claim 3, wherein a high energy light irradiation ~~of high energy~~ is applied to the layer of selectively oriented carbon nanotubes, ~~monolayer film formed in step 4), in order~~ so that some of the organic ~~macromolecular~~ macromolecules with hydrophilic and hydrophobic ends are decomposed and evaporated from the substrate.

Claim 10. (currently amended) The ~~control~~ method of claim 4, wherein a high energy light irradiation ~~of high energy~~ is applied to the layer of selectively oriented carbon nanotubes, ~~monolayer film formed in step 4), in order~~ so that some of the organic ~~macromolecular~~ macromolecules with hydrophilic and hydrophobic ends are decomposed and evaporated from the substrate.

Claim 11. (currently amended) The ~~control~~ method of claim 5, wherein a high energy light irradiation ~~of high energy~~ is applied to the layer of selectively carbon nanotubes, ~~monolayer film formed in step 4), in order~~ so that some of the organic ~~macromolecular~~ macromolecules with hydrophilic and hydrophobic ends are decomposed and evaporated from the substrate.

Claim 12. (currently amended) The ~~control~~ method of claim 8, wherein the high energy light irradiation is UV irradiation.

Claim 13. (currently amended) The ~~control~~ method of claim 9, wherein the high energy light irradiation is UV irradiation.

Claim 14. (currently amended) The ~~control~~ method of claim 10, wherein the high energy light irradiation is UV irradiation.

Claim 15. (currently amended) The ~~control~~ method of claim 11, wherein the high energy light irradiation is UV irradiation.

Claim 16. (new) The method of claim 1, wherein the hydrophobic treatment of the solid substrate includes submerging the solid substrate into a concentrated acid at a temperature above 50°C, and silanizing the solid substrate, wherein the submerging is followed by the silanizing.

Claim 17. (new) The method of claim 16, wherein the concentrated acid is a concentrated nitric acid.

Claim 18. (new) The method of claim 1, wherein said chemically modifying the purified carbon nanotubes includes nitrifying the carbon nanotubes to form carboxyl groups on each of the two ends and a side of each of the carbon nanotubes, and acylating and aminating the carbon nanotubes to attach the organic macromolecules to the carbon nanotubes; where the nitrifying is followed by the acylating and aminating.

Claim 19. (new) The method of claim 1, wherein said chemically modifying the purified carbon nanotubes includes sulfating and nitrifying the carbon nanotubes to form carboxyl groups on each of the two ends and a side of each of the carbon nanotubes, and acylating and aminating the carbon nanotubes to attach the organic macromolecules to the carbon nanotubes, wherein the sulfating and nitrifying are followed by the acylating and aminating.